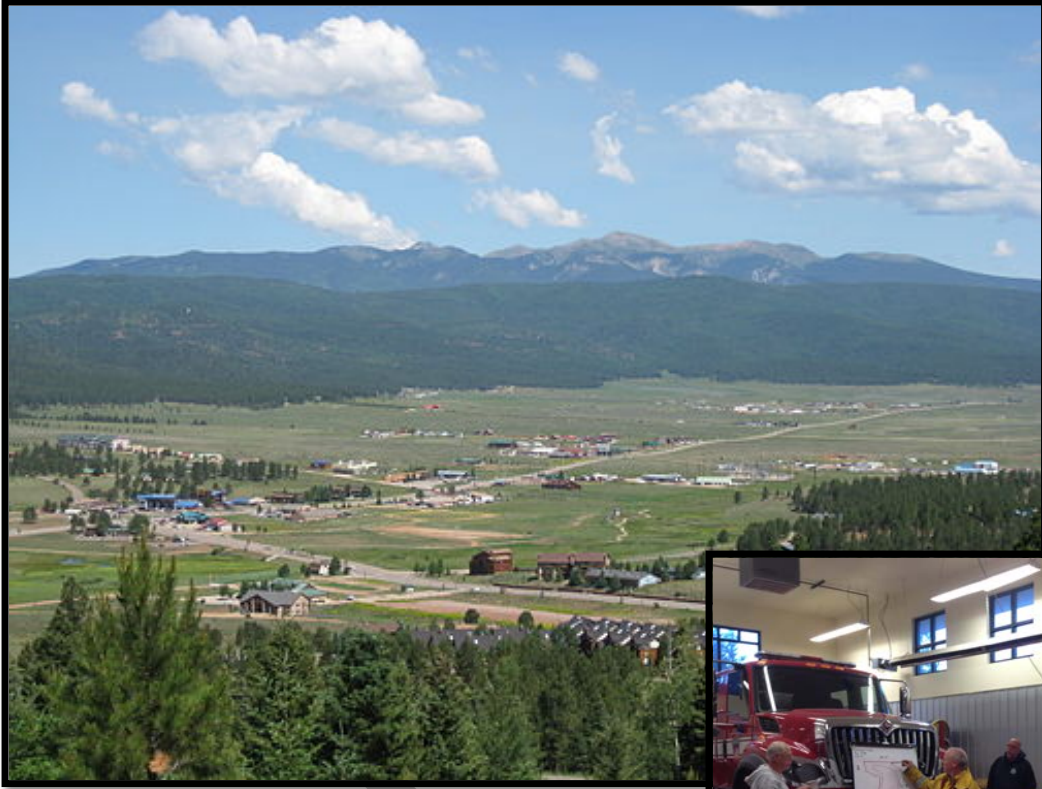


Village of Angel Fire Community Wildfire Protection Plan 2016 Update



Prepared by the Forest Stewards Guild
Santa Fe, NM

Table of Contents

Introduction	1
1 Accomplishments since 2009 CWPP	2
Public Information and Involvement.....	2
Reducing Structure Ignitability.....	4
Fuels Treatment	5
Evacuation Planning	9
2 Community hazard ratings and priority rankings	11
Areas of special interest	15
3 Priorities for 2016 and beyond.....	17
4 Companion plan crosswalk	17
5 Wildfire preparedness	18
Ingress and egress	18
Safety zones.....	19
Smoke impacts	19
Communication.....	19
Evacuation	20
5 Planning for post-fire recovery.....	21
6 Collaboration and public participation.....	23
Appendix A: Resident survey responses.....	24

Introduction

In accordance with the Healthy Forests Restoration Act (HFRA) of 2003, the Village of Angel Fire completed a Community Wildfire Protection Plan (CWPP) in 2009. The 2009 CWPP addressed the three core requirements identified in the HFRA, 1) identifying and prioritizing fuels reduction opportunities across the landscape, 2) addressing structure ignitability, and 3) collaborating with stakeholders. The New Mexico Fire Planning Task force recommends that CWPPs be updated every five years in order to assess new hazards and monitor progress made since the last CWPP update. Building community resilience to wildfire requires an adaptive approach that uses the lessons of the past to inform future management.

In 2015, the New Mexico Association of Counties (NMAC), in collaboration with the Forest Stewards Guild, developed guidelines for updating CWPPs. The guidelines outline the process for updating existing CWPPs as follows:

1. Review existing CWPP.
2. Host collaborative meetings.
3. Update maps.
4. Reflect changes in risk ratings due to complete projects or changes in landscape.
5. Develop updated priorities.
6. Distribute CWPP update drafts to key stakeholders (including local, state, tribal, and federal partners) for review and input before the final approval.
7. Submit the final document to your local government body, local fire department(s) and State Forestry for required signatures and endorsement.
8. Once signed and endorsed by your local governing parties, submit all documentation to NM State Forestry no later than September 1st for final approval by the New Mexico Fire Planning Task Force.

The 2015 CWPP update guidelines also recommend that updates include sections on planning for wildfire preparedness (during a wildfire) and post-fire recovery. Post-fire effects, such as flooding and erosion, can often be as bad or worse than the damage sustained during the fire itself. By planning ahead of time, communities can expedite the restoration process and take an active, rather than reactionary role in post-fire recovery.

In addition the items listed above, CWPPs and updates must also include the following elements:

1. Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties
2. Prioritized fuel reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
3. Reduce structural ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan
4. Secure signatures:
 - a. The applicable local government (i.e., counties or cities);
 - b. The local fire department(s); and
 - c. The state entity responsible for forest management.

This update is divided into six sections that build on the 2009 CWPP. Section one provides an overview of accomplishments and progress made since the 2009 CWPP. Section two updates community hazard ratings based on changes that have or have not occurred in communities at



risk. Section three identifies priorities for fuels reduction projects in the village as well as other priorities community members and village officials identified. Section four makes recommendations for ways to improve preparedness during a wildfire event. Section five outlines key elements necessary for planning for post-fire recovery proactively, rather than after a wildfire occurs. Section six summarizes the collaborative process that guided this document.

1| Accomplishments since 2009 CWPP

The Village of Angel Fire and adjacent land jurisdictions have made significant progress on many of the action items identified in the 2009 CWPP. This section will provide an overview of progress made towards each action item focus areas identified in the 2009 CWPP.

Public Information and Involvement

1. *Educate homeowners and potential contractors (home-building, forest thinning, etc.) about forest health and fire prevention.*
2. *Coordinate with community groups and area Firewise organizations to promote fire prevention, fuels treatment and defensible space.*
3. *Create a group to develop fire prevention and hazard reduction messages and methods to promote community awareness and minimize the effects of a wildfire on the economy and environment.*
4. *Conduct fire prevention campaigns during times when fire danger is high. Use newspapers, radio messages and signs to alert visitors and residents alike.*

Several efforts have been successful in educating homeowners and other stakeholders about forest health and fire prevention in the Village. Prominent examples include:

- The appointment of a Wildfire Protection Committee in 2014. More information about the Wildfire Protection Committee is included in number 3 of this section.
- Public meetings ahead of and after the 2013 and 2014 Black Lake Prescribed fires, which were implemented six miles south of the Village on State Trust land. Residents had an opportunity to voice their concerns regarding the use of prescribed fire near their community. Residents also learned about how prescribed fire is used as a restoration and risk reduction tool to protect communities.
- Association of Angel Fire Property Owners meetings covered such topics as defensible space treatments and fuels reduction treatments in Village greenways.

The Colfax County Coalition of Firewise Communities (CCCFC) has been active in educating area residents about ways to reduce the risk of wildfire to their homes and communities. Members of the CCCFC were active participants in the core team for the 2016 Angel Fire CWPP update. Scott Jones, president of the CCCFC is also a member of the Village of Angel Fire Wildfire Committee (<http://www.angelfirenm.gov/departments/page/44/Wildfire-Protection-Committee/>). To date, there are 9 Firewise communities in Colfax County, which are listed below:

- Taos Pines Ranch
- Hidden Lake



- Elk Ridge
- Aspen Hill
- *Lakeview Pines
- Ute Park
- Idlewild
- Green Valley
- Vermejo Park

**Firewise certification achieved since 2009*

In addition to the communities listed above, CCCFC also has working relationships with Cimarron, the Philmont Scout Ranch, and the Taos Ski Valley. Cimarron's certification as a Firewise community is currently in progress. While they were previously recognized as Firewise, their certification lapsed and so they have begun the process to regain their status.

CCCFC has been instrumental in addressing one of the primary challenges related to fuels reduction and defensible space treatments; slash disposal. CCCFC coordinates chipper days throughout the year to help communities dispose of slash from fuels reduction treatments. CCCFC works with partner Firewise communities to coordinate their chipper days, including working with the Larry Osborn, the Colfax County Fire Marshal, to loan out the county chipper. Few communities have access to their own chipper so this coordination and sharing of resources sets an excellent example for other communities looking to dispose of slash.



Photo: Joe Stehling
Image 1 Hidden Lake Firewise Community chipper day

The community of Hidden Lake has plans to purchase an air curtain burner through a grant from the New Mexico Association of Counties, which will provide another method for slash disposal. Hidden Lake has agreed to loan the air curtain burner to other Firewise Communities for a small fee that will offset the costs of maintenance and transportation.

CCCFC has also worked to educate local residents on how to be better prepared in the event of a wildfire. CCCFC has coordinated "train the trainer" workshops on the Ready, Set, Go! Program (<http://www.wildlandfirersg.org/>). In May 2015, CCCFC posted an informational video on Youtube titled "Saving the Mountain, Saving Your Home" (<https://www.youtube.com/watch?v=SI8jvrPayT8>). The video provides an overview of why forests in the Southwest are in need of restoration, steps homeowners can take to reduce the risk of wildfire by implementing defensible space treatments, and the Ready, Set, Go! Program.

In July, 2014 Village Mayor Barbara Cottam and the Village Council appointed a Wildfire Protection Committee. The Committee was established to assist the Mayor, Council, and Staff to:

1. Develop policy and ordinances for wildfire protection

2. Develop implementation plans for the Wildfire Protection Program
3. Provide education and outreach for the Wildfire Protection Program

The committee meets regularly on the second Monday of the month at 1:00pm at Angel Fire Village Hall. The Committee has made progress towards their goals in several ways. In The summer of 2014 and 2015, the Committee hosted open houses for residents to learn about the Village's wildfire protection program. Attendees had an opportunity to ask questions of Village officials and other experts about steps they could take to reduce their risk. Each open house had about sixty attendees. The Wildfire Committee also been featured in articles written in the Sangre de Cristo Chronicle about wildfire preparedness, met with community leaders from the Rotary Club and Chamber of Commerce, and with local realtors who are in a unique position to educate potential homebuyers about the risks associated with living in a fire adapted ecosystem.

Several groups including the Angel Fire Fire Department, the Wildfire Committee, and the CCCFC conduct outreach campaigns to alert residents during high fire danger times. The Angel Fire Fire Department (<https://www.facebook.com/groups/380148192364/>) and the CCCFC (<https://www.facebook.com/CCCFWC/?fref=ts>) both maintain Facebook pages to share information about wildfire preparedness and important details about ongoing wildfire events. The Wildfire Protection Committee has several resources available on their webpage, <http://www.angelfirenm.gov/departments/page/44/Wildfire-Protection-Committee/>. During fire season, the Village's marquee is used to alert residents of fire danger during fire season.

Reducing Structure Ignitability

1. *Expand the current Wildland Urban Interface provisions to existing structures. Develop construction standards to reduce the vulnerability of wooden decks, especially on slopes. Implement the provisions in the highest hazard and risk areas first. Thin vacant lots adjacent to existing structures where needed to provide adequate defensible space.*
2. *Pursue state and federal grants that can support defensible space projects on both public and private lands. Landowners and local government can provide cost share support.*
3. *Expand the slash disposal service to encourage homeowners to reduce wildland fuels on undeveloped lots and to install and maintain defensible space around structures. Implement incentives for slash fees to support thinning.*

The Village has received several grants aimed at reducing hazardous fuels around homes, along roadways, and in greenways. In 2010, the Village received a Wildland Urban Interface and Hazardous Fuels Reduction grant from the New Mexico State Forestry division to create defensible space around homes and to thin along roadways. A forester was contracted to educate homeowners and to provide assistance to the thinning contractor used for the project. Many residents took part in the cost-share program. The Village also received funding from the American Recovery and Reinvestment Act for thinning of hazardous fuels. New Mexico State Forestry also funded thinning near the boundaries of the Zia/Osha fire.



The Village has a slash removal program, which is paid for by a fee on resident water bills, to help landowners dispose of slash from thinning projects. Since 2009, the Village has purchased a grapple truck to help with the removal of larger material and has ordered a second grapple truck. In 2014, the Village received funding from a Collaborative Forest Restoration Program grant to purchase a cordwood boiler that uses woody debris to heat the transfer station.



Image 2 Cordwood boiler installed outside of transfer station

Fuels Treatment

1. *Expand the current Wildland Urban Interface provisions to existing undeveloped lots. Treat the highest hazard and risk areas first. Consider requirements that emphasize thinning along roadways and property lines and might not require thinning entire lots.*
2. *Conduct fuels reduction projects within or adjacent to the Village of Angel Fire based on the community hazard rating and fire behavior analysis sections of this plan.*
3. *Pursue state and federal grants that can support fuels reduction projects on both public and private lands within the Village. Landowners and local government can provide cost share support.*
4. *Work with the Association of Angel Fire Property Owners (AAFPO) Amenities Committee to conduct demonstration fuels reduction projects on the open space “green belt” trails throughout the Village that they maintain.*
5. *Continue to participate in the Taos Canyon Collaborative Forest Restoration Program (CFRP) Coalition as described in its Memorandum of Understanding between Taos Pueblo, the Village of Angel Fire, Rocky Mountain Youth Corps, National Renewable Energy LLC, H.R. Vigil Small products, Urban Interface Solutions, and Amigos del Bosque, LLC.*
6. *Actively participate in the planning, evaluation and monitoring of all federal, state, tribal and CFRP fuels treatment projects to assure agencies are working together to conduct high priority projects that are effective and benefit the Village.*
7. *Consider supporting the USDA-Forest Service, Carson National Forest prescribed burn and wildfire use programs, provided that community concerns for safety and smoke management are understood and followed.*

8. *Encourage the New Mexico Department of Game and Fish (NMDGF) to participate in the Angel Fire Community Wildfire Protection Plan implementation to provide a wildlife management perspective.*

Map X shows fuels reduction treatments that have occurred in and around the village since 2009. Defensible space treatments have also been implemented by many landowners through the cost-share grant program the Village received from New Mexico State Forestry. Table X in section 2 of this document provides an overview of treatments that have occurred in each of the communities within the Village.

With funding from New Mexico State Forestry, thinning in the Village greenbelts has been completed and is depicted as NMSF fire treatments in map 1. However, maintenance thinning is needed in the future as vegetation regrows.

In addition to the grants and thinning projects listed in item number 2 of the Reducing Structural Ignitability section, the Village supported several forest restoration projects on State Trust and Forest Service land that have reduced the risk of wildfire for the Village. These include several Collaborative Forest Restoration Program (CFRP) Projects near Black Lake and New Mexico State Forestry funded projects. Map 2 contains a map of nearby forest restoration treatments in the Black Lake CFRP landscape.

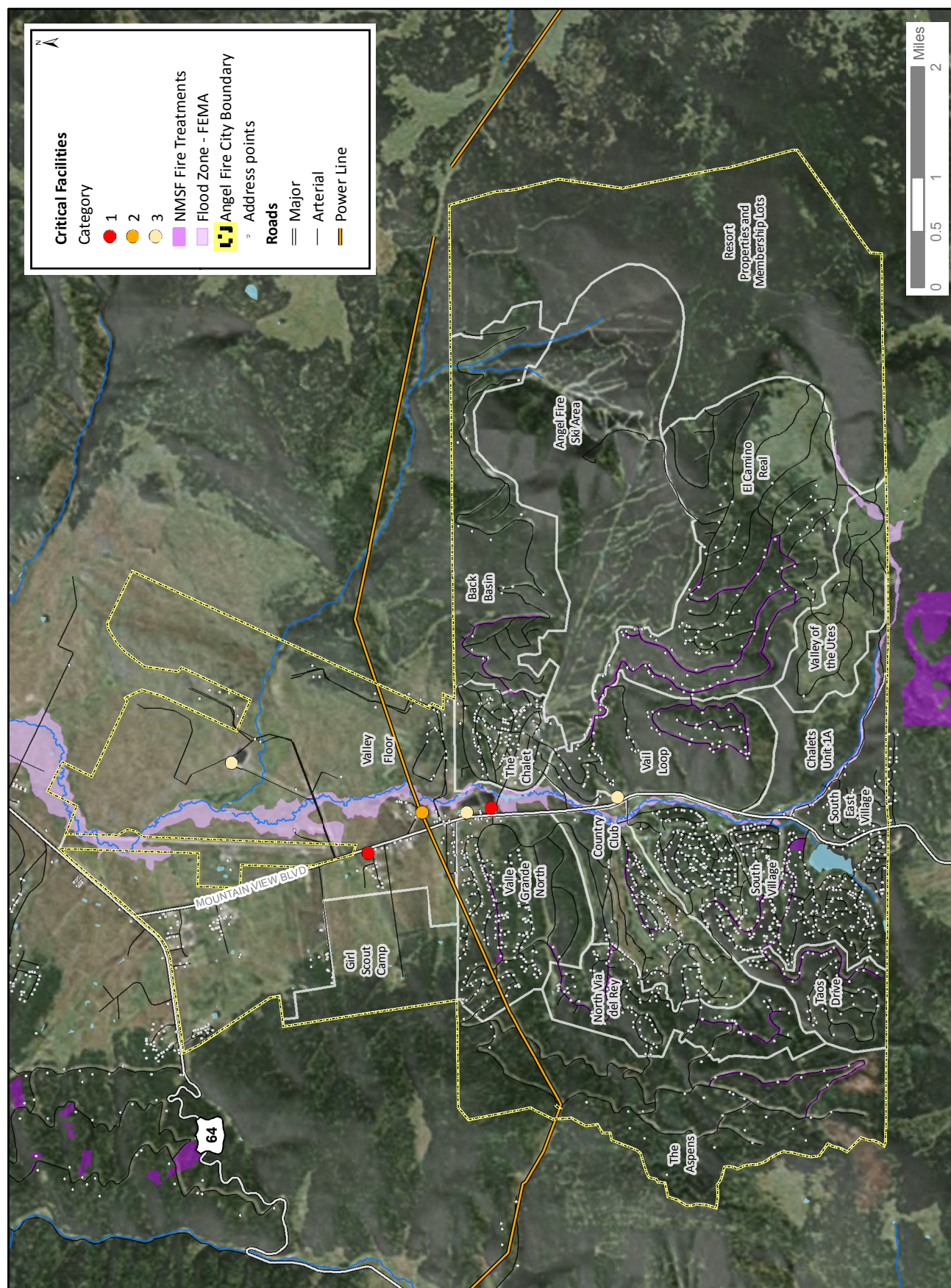
The Village worked successfully with the New Mexico State Land Office, the Forest Stewards Guild (Guild), The Nature Conservancy and other partners to implement prescribed burns in 2013 and 2014 near Black Lake on State Trust lands. Both prescribed burns were funded by a CFRP grant awarded to the Forest Stewards Guild. There were pre and post burn public meetings where residents shared their concerns, which included smoke impacts, and learned about using fire as a forest restoration tool.



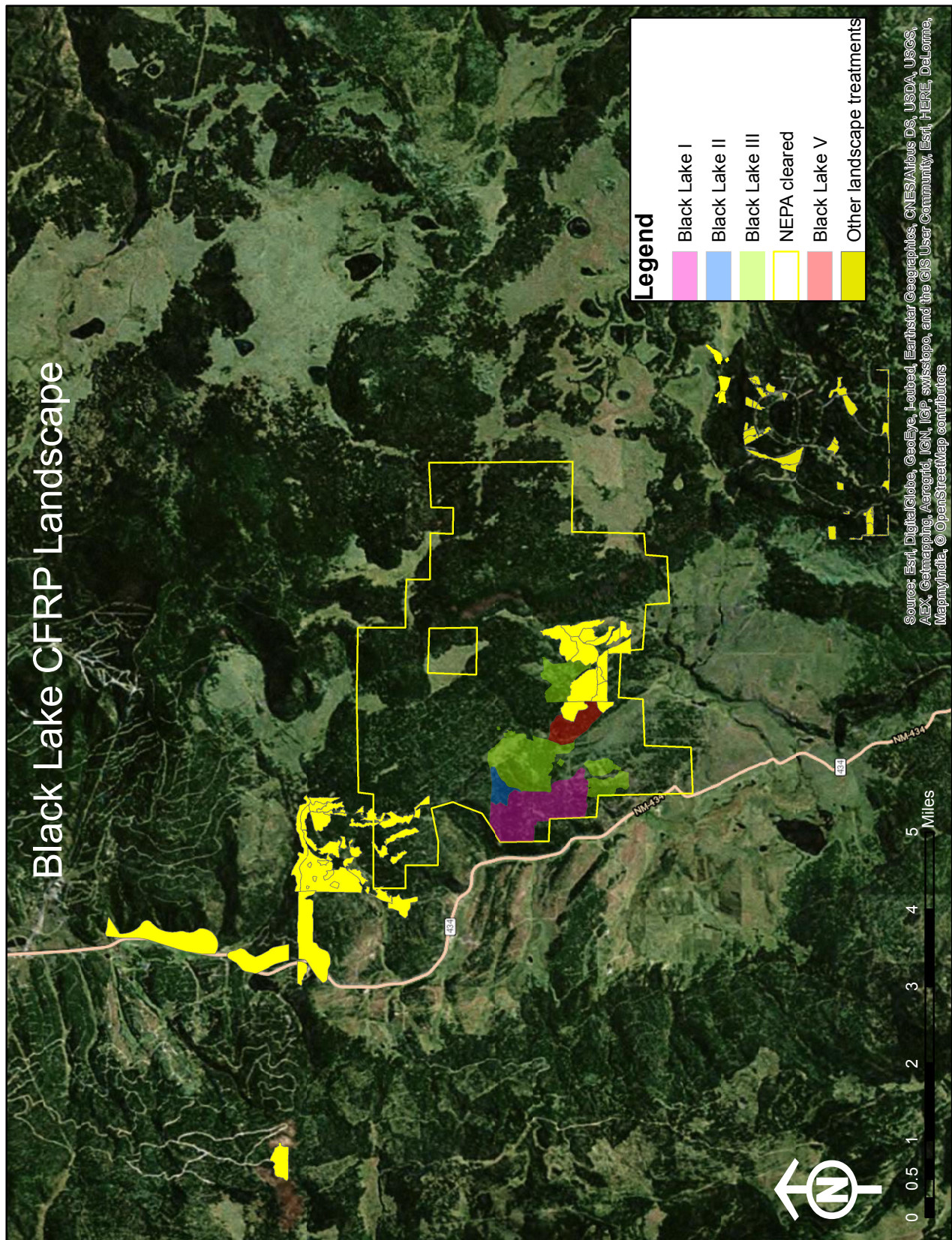
Figure 1 A public notice about the 2014 Black Lake Prescribed burn at Lowes grocery store in Angel Fire.

The Forest Stewards Guild implemented several lessons learned from 2013 to alleviate resident concerns and improve communication. In 2014, the Guild utilized social media to share information about the burn more frequently and sent out a daily email summary to keep residents informed about burn operations. In 2014, the Guild and local partners went door-to-door to businesses in town to answer questions residents might have and to share information about burn operations.

Map 1 Fuels reduction treatments



Map 2 CFRP treatments near Angel Fire



Evacuation Planning

1. *Establish signs identifying evacuation routes. Routes could be color coded to simplify instructions to the public.*
2. *Thin vegetation along roadways and at intersections where possible to create the greatest potential for visibility during a wildfire. Refer to the fuels treatment section of this Plan for more information.*
3. *Advise the public about evacuation routes and the pre-identified safety zones at the airport, community center and golf course.*
4. *Use radio stations to disseminate emergency information and advise the public of their importance as a primary source of information.*
5. *Ensure that area radio stations are aware of their importance as disseminators of emergency messages, and regularly review and update procedures for authorizing such messages.*
6. *Investigate the potential use of warning systems such as emergency sirens, mass notification systems (such as “Reverse 911), helicopter-mounted public address systems, etc.*
7. *Involve the Village Police Department, Colfax County Sheriff’s Department, State Police, and other cooperators in reviewing current Emergency Operating Plans and conducting field exercises.*
8. *Create handouts or messages advising the public about how to prepare for an evacuation. Consider emphasizing that when getting ready to evacuate, people should remember the “5 P”s: Pictures, Pets, Papers, Pills and Phones.”*

The fuels treatment section of this document provides an overview of fuels reduction grants the Village has received since 2009. In total, 144 acres have been thinned since 2009 along Village roadways, improving ingress and egress for emergency vehicles and residents. Roadways that have been thinned include: Agua Fria Circle, Agua Fria Drive, Back Basin Road, Buming Sky Drive, El Camino Real, Panorama Overlook, Panorama Way, Peralta Circle, Peralta Drive, Royal Avenue, Santo Domino Trail, South Vail Overlook, Spyglass Hill Road, Taos Drive, Trevino Circle, Vail Avenue North, Vail Avenue South, Vail Overlook, Valle Grande Trail North, Via del Rey, and Zia Road.

In the event of an emergency such as a wildfire, the Village has signage that can be used to guide residents during an evacuation. The Village also has a draft evacuation plan in development. Colfax County has an emergency notification system (reverse 911) that Village residents can use to receive notifications. To sign up for this program, residents can go to this website, <https://public.coderedweb.com/cne/en-US/6AF053DCB942> and enter their contact information.

Area Firewise communities, such as Taos Pines Ranch, have several resources available on their websites related to wildfire preparedness. The Village Wildfire Committee also has resources available for residents on their webpage <http://www.angelfirenm.gov/departments/page/44/Wildfire-Protection-Committee/>.



Fire Department Capacity [Please note that a separate review and recommendations report is being delivered about the Fire Department operations. The items noted here are specific to wildland fire needs.]

1. *Improve the fire department's Insurance Services Organization (ISO) rating. Improved firefighter response, fire equipment such as a ladder truck, additional fire stations and additional water delivery and storage capacity should improve the fire department's Insurance Services Organization (ISO) rating. An improved ISO rating will increase annual fire department funding and reduce homeowner insurance rates.*
2. *Establish a position knowledgeable in forestry or natural resources to implement and enforce WUI ordinances, obtain and manage WUI and hazardous fuels reduction grants, coordinate fire prevention activities and public involvement such as the Firewise communities program, and coordinate cooperator actions (including Forest Service, NM State Land Office, Taos Pueblo, and local Colfax County groups).*
3. *Encourage the cross-training of area fire departments, local government officials and state and federal agencies using the Incident Command System (ICS) to manage an emergency incident.*
4. *Maintain the Enchanted Circle annual operating plan to coordinate area wildfire management. An annual operating plan has been prepared cooperatively with local, state, and federal government agencies.*
5. *Participate in interagency fire incidents to increase experience. Continue to participate in the New Mexico Resource Mobilization Plan to gain experience conducting wildfire suppression in wildland urban interface communities.*
6. *Conduct local, effective, and certified wildland fire trainings. Maintain wildland firefighter qualifications.*
7. *Consider developing a regional training center. Reach out to regional cooperators such as the Enchanted Circle, Raton Fire Department and Colfax and San Miguel County Fire Departments.*
8. *Continue to improve water storage and delivery systems. Complete development of one million gallon storage tank and connect the new storage into the existing water delivery system. Study how power outages or other problems during a wildland fire would affect water delivery.*

The Angel Fire Fire Department has increased its capacity in several ways since 2009. Accomplishments include the completion of the new Fire Station number 2, and equipment purchases of a platform truck and Type 3 wildland urban interface engine. Village fire fighters have also gained experience on many wildfires including the White, Los Conchas, Wallow Canyon, Mayholl, Little Bear, Whitewater Baldy, Whites Peak, and the Chalen Complex. Village fire fighters also participated in the 2013 and 2014 Black Lake prescribed fires.

During the White Peaks Fire near Ocate, the Village Fire Department and other area fire department including the Moreno Valley Fire Department worked together with the Colfax County Sheriff's office to alert residents of the possibility that they might need to evacuate. The



wildfire provided a unique opportunity for area fire and emergency managers to train for an evacuation event during an ongoing incident.

2| Community hazard ratings and priority rankings

Community hazard ratings for the 2016 CWPP update were re-assessed in collaboration with members of the CWPP core team and through input from members of the public. The 2009 community hazard ratings (CHR) were developed using the Wildfire Hazard Rating System model, which “combines physical infrastructure such as structure density and roads, and fire behavior components like fuels and topography, with the field experience and knowledge of wildland fire experts” (Angel Fire CWPP, 2009). In order to conform to New Mexico State Forestry’s statewide CHR system, CHR for the Village of Angel Fire of High, Medium, and Low were used in place of the 2009 ratings of Very High, High, and Moderate.

Many of the factors that went into the 2009 CHR are relatively static and not subject to change such as topography. The reassessment for the 2016 update focused on dynamic factors of the CHR including fuels, community involvement, and road improvements to determine whether the improvement or degradation of any of these factors warrants a change to the CHR. Core team members and members of the public provided input and comment on the updated 2016 CHR. Core team members were asked the following questions related to CHR for each community in the Village of Angel Fire:

1. Have any access roads been added or taken away from the community?
2. Have there been any positive or negative changes to road conditions?
3. Have there been any fuels reduction projects in the community?
 - a. Are they older than 10 years?
 - b. Defensible space zone 1 treatments?
 - c. Fuel break?
 - d. Open space thinning?
4. Have there been any changes to community involvement, such as the creation or dissolution of a firewise community?

After discussion with core team members and members of the public, priority rankings for communities largely remained the same with two exceptions. First, due to a greater amount of fuels reduction projects in the Vail Loop neighborhood, it was reduced to the second priority ranking. Second, taking into consideration factors including a high concentration of wooden structures, and the presence of youth during fire season, the Girl Scout Camp’s risk rating was elevated to Medium and it’s priority ranking to number 8. Table 1 displays the priority rankings and CHR for 2009 and 2016 and also includes notes on progress made since 2009. Map 3 shows each of the communities with their associated CHR.

Table 1

Community Name	2009 Priority Ranking	2016 Priority Ranking	2009 Hazard Rating	2016 Hazard Rating	Changes since 2009
Vail Loop	1	2	Very High	High	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments. • Thinning on major egress from community. • Increased community



					involvement, informal Firewise group established.
Back Basin	2	1	Very High	High	<ul style="list-style-type: none"> • Public Improvement District added some new roads. Existing roads have experienced some deterioration. • Some defensible space zone 1 treatments and open space thinning.
El Camino Real	3	3	Very High	High	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments. • Increased community involvement. • Some thinning along roadways.
Taos Drive	4	4	High	Medium	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments. • Thinning around primary egress routes. • Increased community involvement.
South Village	5	5	High	Medium	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments.
South East Village	6	7	High	Medium	<ul style="list-style-type: none"> • Improved access with the Valley of the Utes development. • Some defensible space zone 1 treatments.
Valle Grande North	7	6	High	Medium	<ul style="list-style-type: none"> • Some open space thinning. • Road conditions have deteriorated as they have been converted back to gravel. • Increased community involvement.
The Aspens	8	9	Moderate	Low	<ul style="list-style-type: none"> • Some thinning on private land (3-8 acres). • New road created through Public Improvement District.
North Via del Rey	9	10	Moderate	Low	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments. • Increased community involvement.
Country Club	10	11	Moderate	Low	<ul style="list-style-type: none"> • Some thinning on individual lots. • Increased community involvement.
The Chalet	11	12	Moderate	Low	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments.
Valley of the Utes	12	13	Moderate	Low	<ul style="list-style-type: none"> • Some defensible space zone 1 treatments. • Some new roads improve access.
Girl Scout	13	8	Moderate	Medium	Forest service side of girl scout

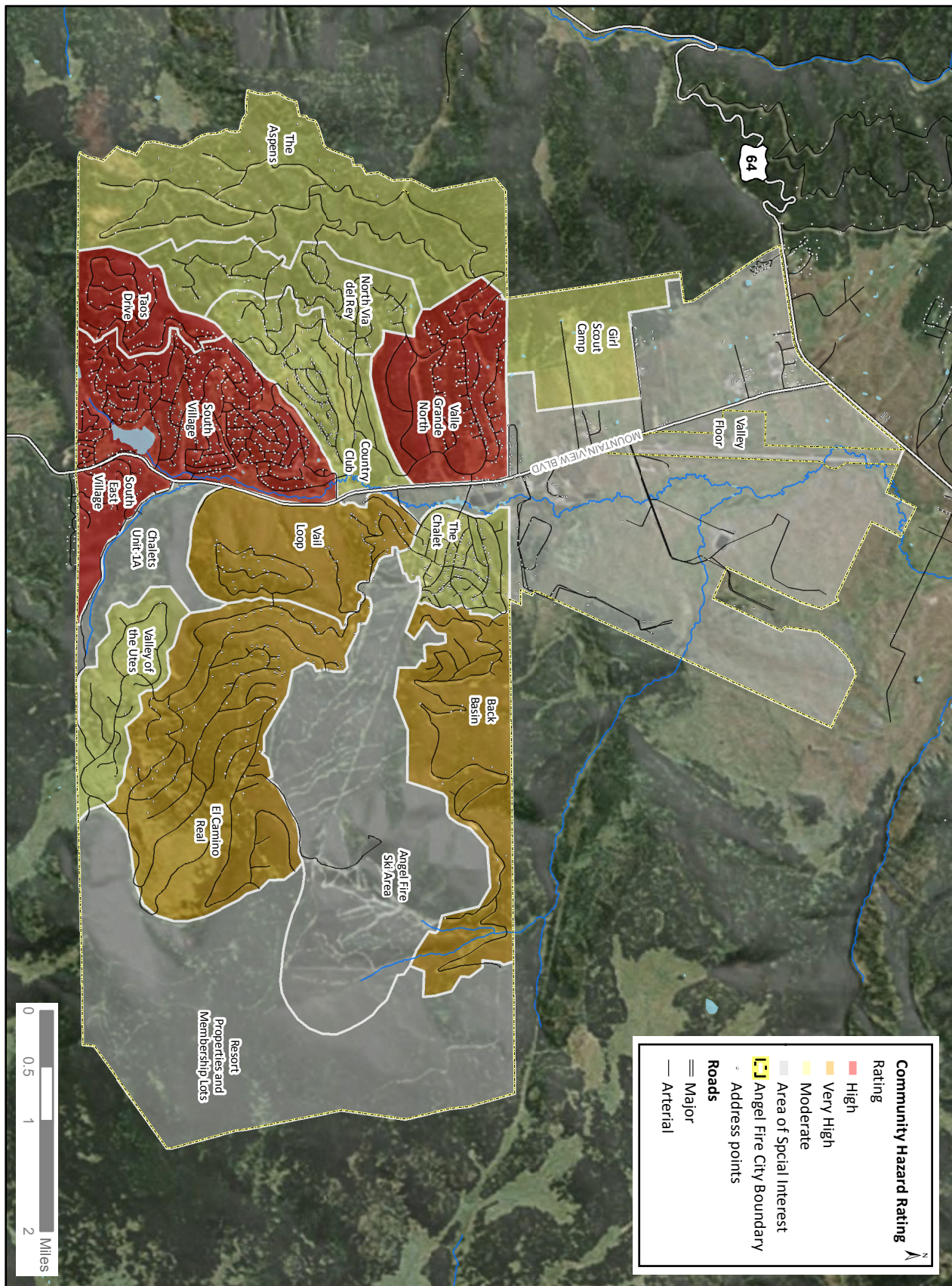


Camp					camp, thinning, piles etc. Some thinning on Girl Scout camp property.
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DRAFT



Map 3 Community Hazard Ratings

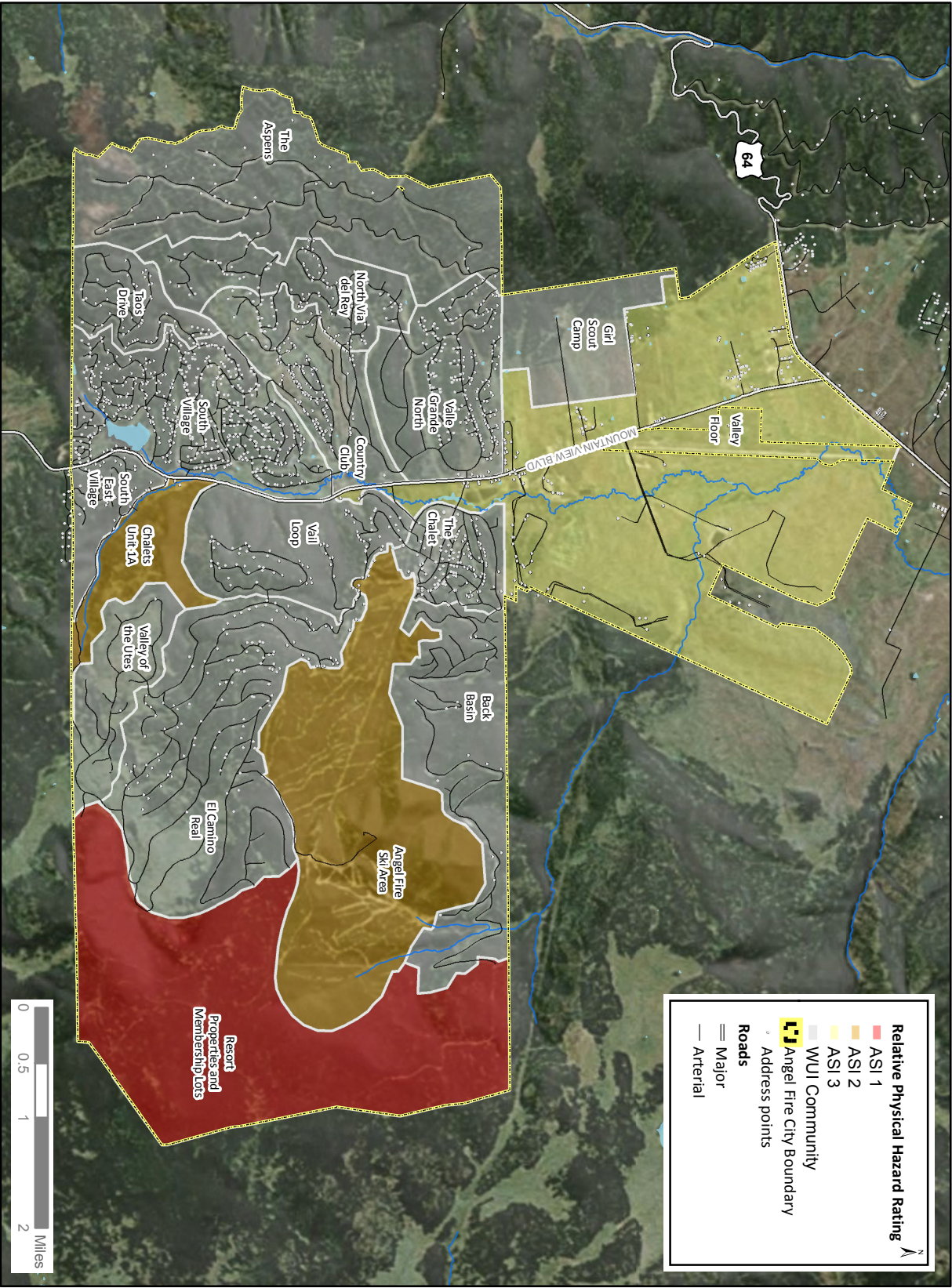


Areas of special interest

The 2009 Angel Fire CWPP (2009) also identified four special interest areas and assigned each of them a relative physical hazard rating (Angel Fire CWPP, 2009), which are different from community hazard ratings. The relative physical hazard rating (RPH) has three categories; low, moderate, and high. RPH combines the mean fireline intensity and “other fire behavior indicators such as rate of spread, flame length, and heat per unit area” and models (Angel Fire CWPP, 2009). To date, no fuels reduction treatments have been conducted in any of the special interest areas since 2009. As such, the 2009 ratings remain the same. Map 4 shows the areas of special interest and their RPH.



Map 4 Areas of Special Interest



3| Priorities for 2016 and beyond

**Identifying priorities for 2016 and beyond will be discussed at the final core team and public meetings in June.*

4| Companion plan crosswalk

The Village of Angel Fire Hazard Mitigation Plan updated in October 2015 is an important companion document and should be linked to the CWPP. In fact, the Hazard Mitigation Plan ranks wildfire as the hazard with the highest impact and the highest likelihood. The total risk score for wildfire is more than double the score for the next highest ranked hazard (drought).

Village of Angel Fire Hazard Mitigation Plan Impact and Vulnerability Score for Wildfire			
Parameter	Definition	Wildfire score	
Geographic Extent	Size of the affected area. Includes areas not damaged but strongly affected by the incidents. For example, areas backed up by a transportation accident.	5	Regional
Duration	How long does the acute crisis part of the disaster last?	5	30+ days
Environment	How damaging is the disaster for the natural environment?	5	Permanent loss of ecosystem
Health Effects	How dangerous is the disaster for the natural environment?	2	1-10 deaths and/or 1-100 injuries
Displacement	How likely is the hazard to negatively impact the exposed population in terms of displacement, personal property loss and increased indebtedness?	5	1000+ displaced people. More than 30% of population facing acute shortages of basic supplies and access to services
Economy	How does the hazard affect the local economy?	5	Physical losses equal to 10% to assess value. Loss of ability to generate revenue.
Built Environment	How does the hazard affect the ability of residents and workers to access the resources they need?	5	1000+ structures red tagged. At least two major utilities degraded at least 50%.
Transportation	How does the hazard affect the ability of residents and workers to access the resources they need?	4	Many critical services inaccessible. One major mode inoperable. One major corridor inoperable.
Critical Services	How likely is the hazard to reduce the ability of government and business to provide critical services? (Medical, Public Safety, Social, Financial, etc.)	4	Temporary degradation of most critical services. Long term degradation of multiple services.
Confidence in Government	Would public's confidence in government be shaken?	3	Somewhat
Cascading Effects	How severe and complex will the secondary effects be?	5	Secondary effects generated and rival or exceed primary hazard. Secondary impacts would definitely be disaster in their own right.
Total		4	



		3	
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The Hazard Mitigation Plan divides the village into four areas though no map was provided in the plan:

- a. Area 1- heavily forested rugged mountainous terrain with few structures (6 total)
- b. Area 2 - heavily forested moderate mountainous terrain with single-family residential structures (1,200 structures)
- c. Area 3 - grassland meadows with business and multi-family condominium/hotel structures (190 structures)
- d. Area 4 - grassland meadows with business and a few single-family structures (above grade utilities and no fire hydrants) (200 structures).

These should be mapped and included in future wildfire preparedness planning.

The Village of Angel Fire has identified six facilities as critical and has placed these facilities in three operational categories: (1) must not lose operational capability, (2) must be operational within 24 hours, and (3) must be operational within 24 to 72 hours. Category 1 facilities are:

- Telephone Exchange (Q west) Mountain View Blvd.
- Village Fire Station 11 N. Angel Fire Road

Category 2:

- Electrical power Substation (Kit Carson) East of Hwy 434

Category 3:

- Waste Water Treatment Plant (Village) 67 Service Road
- Village Hall (Village) 3388 Mountain View Blvd.
- Water Well #1 (Village) 434 and Country Club Drive

The Hazard mitigation plan is on a 5 year schedule for revision – the CWPP could be on the same schedule. We also recommend that the flooding section in the Hazard Mitigation Plan should include the risk of post-fire flooding.

The Hazard Mitigation Plan prioritizes 17 mitigation initiatives many of which would increase the Village's wildfire preparedness including:

- Priority 1 Additional Water Rights
- Priority 2 Hire Emergency Manager
- Priority 3 Fire Station 2
- Priority 5 Additional Fire Equipment
- Priority 7 Water Storage Tanks Repair or Replacement
- Priority 12 Adoption of current NFPA and Life Safety Codes
- Priority 14 Vegetation Management Program to thin forested areas creating defensible space within the Village to protect against wildfires and provide for forest health.

5| Wildfire preparedness

Ingress and egress

Ingress (access for wildfire suppression equipment and personnel) and egress (ways for residents and visitors to escape the wildfire) are crucial to wildfire preparedness. The 2009 Angel Fire CWPP (p 30) includes a discussion of treatments to maintain ingress and egress roads in safe



condition as well as a map of the key ingress/egress roads (figure 8 page 31). Some areas, such as the Taos Drive area, are identified in the 2009 CWPP as having a single gravel road for ingress/egress and has multiple dead ends, which could present serious problems during an evacuation.

Safety zones

Safe zones are areas without burnable fuel where people can gather and be safe from wildfire flames. A safety zone should be large enough so that the distance between the firefighters and flames is at least four times the maximum flame height. For example a parking lot would qualify as a safety zone unless it was small and surrounded by large trees. In the context of the Angel Fire CWPP, there are two scales of safety zone one for families near their homes and another, larger set of safety zones where more community members and visitors can gather. The CWPP core team should work to identify community safety zones within the village.

Smoke impacts

Wildfire smoke is not healthy and older adults, children, and people who have heart or lung diseases are most at risk from its adverse effects. Even wildfires miles away from the Village of Angel Fire may cloud the air with smoke and residents and the Center for Disease Control recommends the follow measures to decrease the impact of wildfire smoke:

- Check local air quality reports;
- Keep indoor air as clean as possible by keeping doors and windows shut;
- Avoid activities that increase indoor pollution such as smoking, burning candles, fireplaces, or gas stoves; and
- Seek shelter in a designated evacuation center or away from the affected area if necessary.

Communication

Communication is one of the best tools for reducing the impact of wildfires. Good communication allows firefighter to efficiently suppress wildfires, residents to evacuate if the need arises, and responders to help those in need. In order to ensure good communication during an incident, it is crucial to have communication before an incident. Emergency responders from Village, county, volunteer fire departments, state, and federal agencies need to be sure they understand each other's communications protocols and requirements. Pre-wildfire season meetings of key individuals are a worthwhile investment to ensure seamless communication during a wildfire. These meetings also serve to build the personal connections and trust that can be very important during an incident.

Communication is also important for families to ensure everyone is safe and accounted for. Often designating an out-of-area friend or relative as a point of contact works best. He or she can act as a single source of communication among family members in case of separation more efficiently when phone, cell, and internet systems are overloaded or limited during a wildfire.

The Federal Emergency Management Agency (FEMA) has a program to help community member be part of the response to disasters called Community Emergency Response Team (CERT). The CERT program helps volunteers use training learned in the classroom and during exercises to assist others in their community after a disaster when professional responders are not immediately available to help.



Evacuation

Residents should be ready to leave as soon as evacuation is recommended by officials to avoid being caught in fire, smoke, or road congestion. Evacuating early helps firefighters keep roads clear of congestion and lets them move more freely to do their job.

Before wildfire season starts residents should develop a plan for evacuation. Family members should have an established emergency meeting location outside the hazard area and a plan for pets and large animals such as horses and other livestock. An easy way to remember what to prepare for an evacuation is the 6 Ps:

- People and pets
- Papers, phone numbers, and important documents
- Prescriptions
- Photos and pictures (irreplaceable memorabilia)
- Personal computer hard drives
- Plastic: credit cards, ATM cards, and cash

Knowing where all these things are when a wildfire starts can make evacuation less stressful.

The Home Evacuation Checklist from www.ReadyForWildfire.org gives a good list of how to prepare for evacuation:

Inside the House

- Shut all windows and doors, leaving them unlocked.
- Remove flammable window shades, curtains and close metal shutters.
- Remove lightweight curtains.
- Move flammable furniture to the center of the room, away from windows and doors.
- Shut off gas at the meter; turn off pilot lights.
- Leave your lights on so firefighters can see your house under smoky conditions.
- Shut off the air conditioning.

Outside

- Gather up flammable items from the exterior of the house and bring them inside (patio furniture, children's toys, door mats, trash cans, etc.) or place them in your pool.
- Turn off propane tanks.
- Move propane BBQ appliances away from structures.
- Connect garden hoses to outside water valves or spigots for use by firefighters. Fill water buckets and place them around the house.
- Don't leave sprinklers on or water running, they can affect critical water pressure.
- Leave exterior lights on so your home is visible to firefighters in the smoke or darkness of night.
- Put your Emergency Supply Kit in your vehicle.
- Back your car into the driveway with vehicle loaded and all doors and windows closed. Carry your car keys with you.
- Have a ladder available and place it at the corner of the house for firefighters to quickly access your roof.
- Seal attic and ground vents with pre-cut plywood or commercial seals.
- Patrol your property and monitor the fire situation. Don't wait for an evacuation order if you feel threatened.
- Check on neighbors and make sure they are preparing to leave.

Animals

- Locate your pets and keep them nearby.
- Prepare farm animals for transport and think about moving them to a safe location early.



5| Planning for post-fire recovery

Because of the significant probability of a wildfire eventually occurring in or around Angel Fire, it is important to plan for how the community will recover after a wildfire. New Mexico State Forestry provides an excellent resource for thinking about post-fire recovery called *After Wildfire* (www.afterwildfirenm.org). In addition, many elements of post-wildfire recovery are similar to recovery from other disasters and are covered in the Village of Angel Fire Hazard Mitigation Plan.

The first post-fire recovery concern is safety. After a wildfire it is important that residents stay away from their homes or businesses until officials determine it is safe to return. Because utility services can be disrupted by wildfire:

- do not drink or use water from the faucet until officials say it is okay;
- use extreme caution around trees, power poles and other tall objects that may have lost stability during the fire;
- if you have a propane tank or system, contact a propane supplier, turn off valves on the system, and leave valves closed until the supplier inspects your system; and
- Look for smoke or sparks that may still be burning.

Post fire flooding is a major concern. The heavy monsoon season rains common in New Mexico in the late summer and early fall can often bring flooding and debris flows after wildfire. These storms are typically very local, very intense, and of short duration, delivering a lot of rain in a short amount of time. When such storms develop over burned areas, the ground cannot absorb the rain, so it runs off the burned area, accumulates in streams, and produces flash floods.

FEMA produces flood risk maps that can help guide post-fire preparation for flooding (see Figure 1 below). Post-wildfire flooding preparation should also be included in the Angel Fire Hazard Mitigation Plan. Some homes and businesses may want to reevaluation their flood insurance coverage in light of the fact that post-wildfire floods are often more extensive than the flood risk before a wildfire might indicate.



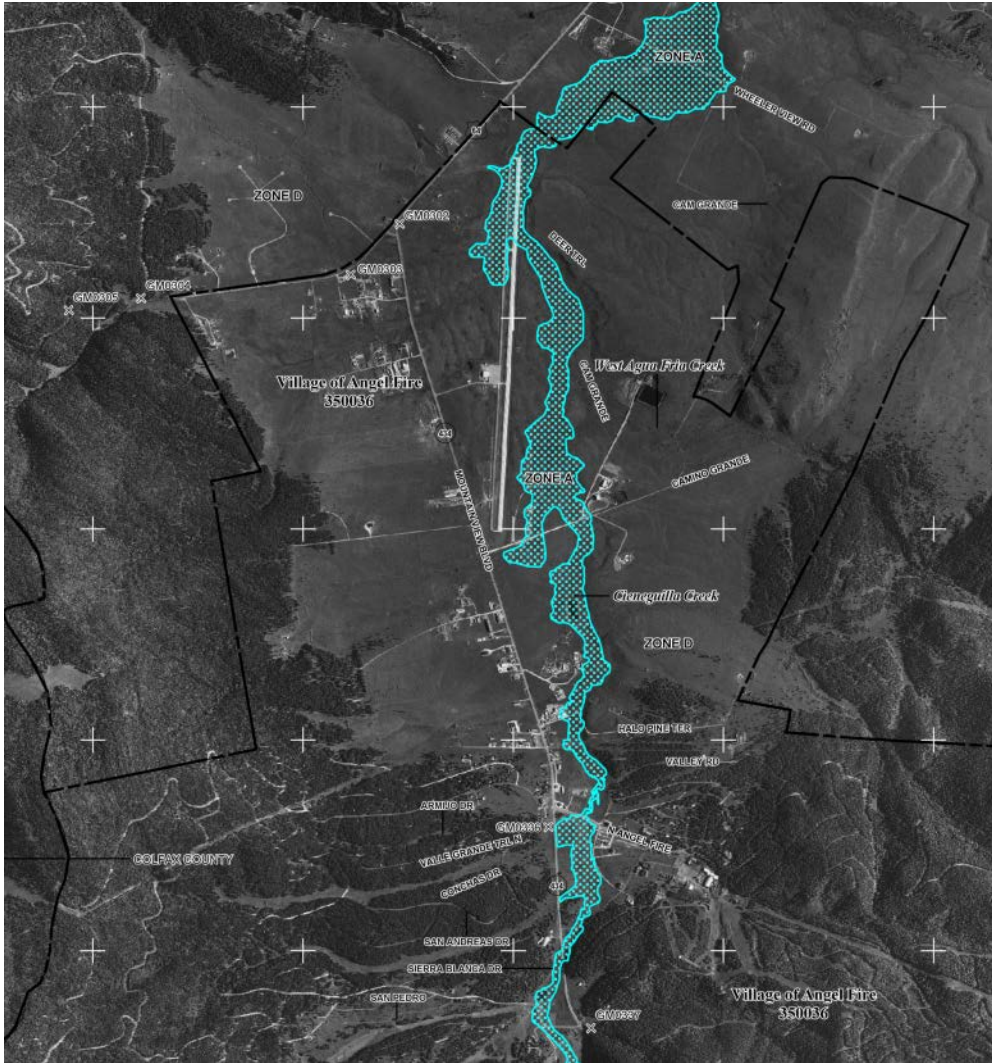


Figure 2 National Flood Insurance Map from FEMA (panel 1100D) showing special flood hazard areas subject to inundation by the 1% annual chance flood

The New Mexico's *After Wildfire* guide suggests communities designate a Post Fire Coordinator (or a few coordinators) to work directly with local, state or federal agencies, emergency response officials, volunteers, and other stakeholders to address needs and seek assistance. Post Fire Coordinators may be part of the Community Emergency Response Team (CERT) mentioned above in the Wildfire Preparedness section.

It may be appropriate to implement post-wildfire treatments in the forest such as erosion control or planting, but first communities should be sure to identify values at risk post-wildfire and focus on treatment that reduce the threat to those values. The *After Wildfire* guide has a catalogue of potential treatments that include:

- Seeding and mulch to reduce erosion;
- Contour log felling and other erosion barriers;
- Checkdams and other channel treatments; and
- Culvert modifications and other road treatments.

6| Collaboration and public participation

**This section will be completed at the end of the CWPP update process and will document community and core team involvement.*

DRAFT

